Epitomes

Important Advances in Clinical Medicine

Dermatology

The Scientific Board of the California Medical Association presents the following inventory of items of progress in dermatology. Each item, in the judgment of a panel of knowledgeable physicians, has recently become reasonably firmly established, both as to scientific fact and important clinical significance. The items are presented in simple epitome and an authoritative reference, both to the item itself and to the subject as a whole, is generally given for those who may be unfamiliar with a particular item. The purpose is to assist busy practitioners, students, research workers or scholars to stay abreast of these items of progress in dermatology that have recently achieved a substantial degree of authoritative acceptance, whether in their own field of special interest or another.

The items of progress listed below were selected by the Advisory Panel to the Section on Dermatology of the California Medical Association and the summaries were prepared under its direction.

Reprint requests to Division of Scientific and Educational Activities,
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Chloracne

CHLORACNE IS A DISORDER of sebaceous follicles characterized by the development of a profusion of open and closed comedones and small, straw-colored cysts. These lesions are heavily concentrated on the malar aspect of the face, the postauricular region, the axillae, the groin and the extremities. The finding of squamous metaplasia of sebaceous glands on histopathologic examination may aid in distinguishing this condition from other acneiform diseases.

Chloracne is caused by the ingestion, inhalation or transcutaneous penetration of certain halogenated aromatic hydrocarbons. The ability to cause chloracne appears to be highly correlated with the systemic toxicity of these compounds. For example, 2,3,7,8-tetrachlorodibenzo-*p*-dioxin is an extremely toxic molecule and is also a potent chloracnegen. In contrast, 1,2,3,4-tetrachlorodibenzo-*p*-dioxin, an isomer that differs only in the position of two chlorine atoms, lacks the ability to induce chloracne and is relatively nontoxic.

The evidence that the presence of chloracne is the single best and most sensitive indicator of exposure to certain halogenated aromatic hydrocarbons comes from the investigation of accidental human contamination. The chloracnegenic compounds are often unwanted by-products of the synthesis of such substances as herbicides (2,4,5-trichlorophenoxyacetic acid, a major component of herbicide Orange) and wood preservatives (pentachlorophenol), or they may directly contaminate foodstuffs (polyhalogenated biphenyls).

Chloracne will develop within three to four months in those persons exposed to a sufficient amount of a chloracnegenic chemical and generally will resolve within two years. Chloracne may persist after exposure to the inciting chemical possibly due to release of these substances from fat reservoirs. In rare cases the condition can continue for as long as 30 years.

In conclusion, the development of chloracne is the single most sensitive indicator of exposure to certain toxic polyhalogenated hydrocarbons. These substances appear to be inescapable by-products of modern industrialized society.

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Pocchiari F, Silano V, Zampieri A: Human health effects from accidental release of tetrachlorodibenzo-*p*-dioxin (TCDD) at Seveso, Italy. Ann NY Acad Sci 1979 May; 320:311-320

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Recessive X-Linked Ichthyosis

RECESSIVE X-LINKED ICHTHYOSIS, an uncommon but not rare disorder, was clearly delineated from other genetic forms of ichthyosis through careful clinical and genealogic studies almost two decades ago. This form of ichthyosis is characterized clinically by the onset shortly after birth of closely adherent dark brown scales that most severely involve extensor surfaces of the extremities but also encroach on flexures. The trunk is involved as is the neck flexure; face, scalp, palms and soles are usually spared. Characteristic but asymptomatic opacities are present in Descemet's membrane of the cornea.

Although the prenatal syndrome of placental steroid sulfatase deficiency, characterized by extremely low maternal urinary estrogen levels despite fetal well-being, was first described in 1969, a decade elapsed before it was recognized that deficiency of this enzyme postnatally resulted in recessive X-linked ichthyosis. It has now been confirmed worldwide